AMENDMENTS TO THE CLAIMS:

Claims 1-9 (Cancelled)

10. (New) A control apparatus, for controlling an inverter for driving a permanent magnet type synchronous electric motor by transmitting a driving signal to a gate driver unit of said inverter, comprising:

a speed command generator for issuing a speed command;

an applied voltage calculation unit for calculating applied voltage;

a PWM (Pulse Width Modulated Wave) generator for generating a pulse width modulated wave; and

a current detector for detecting current of the electric motor, wherein:

said applied voltage calculation unit is responsive to detected current of said electric motor as detected by said current detector and said speed command issued by said speed command generator, and outputs a step-out discrimination signal to said speed command generator and a voltage command to said PWM generator,

wherein said applied voltage calculation unit comprises:

(a) a coordinate converter for inputting and converting the detected current of said electric motor into components on a dc-qc-axis which is a rotational coordinate axis in a control of the detected current of said electric motor; and

(b) a step-out detector responsive to an absolute value of a frequency correction amount $\Delta\omega$ 1q which is outputted by said coordinate converter as a changed amount of current Iqc, for outputting said step-out discrimination signal if said absolute value exceeds a reference value.

11. (New) A control apparatus for controlling an inverter according to Claim 10, wherein:

said applied voltage calculation unit further comprises an axis error calculation unit for estimating and calculating an axis error between a phase of an alternate current referred to a magnetic pole axis of said electric motor and a practical phase of a magnetic pole axis of said electric motor, and

an estimated axis error $\Delta\theta$ c outputted by said axis error calculation unit is inputted to said step-out detector instead of said frequency correction amount $\Delta\omega$ 1q.

12. (New A control apparatus for controlling an inverter according to Claim 10, wherein:

said step-out detector of said applied voltage calculation unit comprises a reactive power calculation unit for inputting said voltage command and the detected current of said electric motor and outputting reactive power, and

a difference between a reference value and said reactive power outputted by said reactive power calculation unit is outputted as said step-out discrimination signal instead of a difference between a reference value and said frequency correction amount $\Delta\omega$ 1q.

13. (New) A control apparatus for controlling an inverter according to Claim 10, wherein:

said speed command generator, said applied voltage calculation unit and said PWM (Pulse Width Modulated Wave) generator are provided with a first circuit wiring board;

said current detector for detecting said current of said electric motor and said inverter are provided with a second circuit wiring board; and

said first circuit wiring board and said second circuit wiring board are provided within a common housing.

14. (New) A control apparatus for controlling an inverter according to Claim 13, wherein a digital circuit comprising a microprocessor is provided with said first circuit wiring board.

15 (New) An apparatus for driving a permanent magnet type synchronous electric motor, comprising:

an inverter for driving the permanent magnet type synchronous electric motor, responsive to a driving signal applied to a gate driver unit of said inverter;

a speed command generator for issuing a speed command;

an applied voltage calculation unit for calculating applied voltage;

a PWM (Pulse Width Modulated Wave) generator for generating a pulse width modulated wave;

a current detector for detecting current of the electric motor, wherein:

said applied voltage calculation unit is responsive to detected current of said electric motor as detected by said current detector and said speed command issued by said speed command generator, and outputs a step-out discrimination signal to said speed command generator and a voltage command to said PWM generator, and

said applied voltage calculation unit comprises:

(a) a coordinate converter for inputting and converting the detected current of said electric motor into components on a dc-qc-axis which is a rotational coordinate axis in a control of the detected current of said electric motor; and

(b) a step-out detector responsive to an absolute value of a frequency correction amount $\Delta\omega$ 1q which is outputted by said coordinate converter as a changed amount of current Iqc, for outputting said step-out discrimination signal if said absolute value exceeds a reference value;

a first circuit board carrying said speed command generator, said applied voltage calculation unit and said PWM (Pulse Width Modulated Wave) generator;

a second circuit wiring board carrying said current detector for detecting said current of said electric motor and said inverter; and

a common housing containing said first circuit wiring board and said second circuit wiring board.